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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,516	09/04/2003	Michael V. Paukshto	A-72209/AJT/TJH	8033

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EXAMINER

WANG, GEORGE Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/656,516

Applicant(s)

PAUKSHTO, MICHAEL V.

Examiner

George Y. Wang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verrall et al. (U.S. Patent No. 6,099,758, hereinafter "Verrall") in view of Mortazavi et al. (U.S. Patent No. 5,667,719, hereinafter "Mortazavi"), and in further view of Trapani et al. (U.S. Pub. No. 2003/0002154, hereinafter "Trapani").

3. As to claims 1-3 and 5, Verrall discloses a liquid crystal display device (fig. 1, ref. 10) comprising a front panel (fig. 1, ref. 18) and a rear panel (fig. 1, ref. 15) and a liquid crystal layer placed between the panels (fig. 1, ref. 16), where the front panel comprises an internal polarizer (fig. 1, ref. 17).

However, the reference fails to specifically disclose an internal polarizer between an electrode and where the polarizer is made of a material chemically stable at an elevated temperature of at least 150 °C.

Trapani discloses polarizers for use in LCDs situated above an electrode (pg. 1, [0002]).

Mortazavi discloses a polarizer for use in LCDs made of an optically anisotropic dichroic crystal film comprising a rodlike supramolecules (col. 2, lines 66-67) formed from a lyotropic LC containing at least one dichroic dye (col. 4, lines 1-9) that is chemically stable at an elevated temperature of at least 150 °C (col. 4, lines 19-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have an internal polarizer between an electrode and where the polarizer is made of a material chemically stable at an elevated temperature of at least 150 °C since one would be motivated to provide high polarizing efficiency with good transmission (Mortazavi, col. 3, lines 1-5) in displays for optimized contrast control (col. 1, lines 15-16) under elevated temperature and humidity situations (col. 4, lines 56-67).

4. Regarding claims 4, 6-8, and 10-12, Verrall discloses the LCD device as recited above where the thickness of the internal polarizer is less than 1 micron (col. 4, lines 11-12) and further comprising an external polarizer (fig. 1, ref. 14) on the other panel, a reflecting layer (fig. 1, ref. 13) on the rear panel that is diffusive and specular, and a backlighting system (fig. 1, ref. 11, 12).

5. As per claim 9, Verrall discloses the LCD device as recited above, however, the reference fails to specifically disclose front lighting system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a front lighting system since it has been held that mere duplication of the essential working parts of a device involves only routine skill in

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the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Furthermore, it front lighting systems are well known in the art to provide illumination in reflective-type displays.

6. As per claims 13-17, Verrall discloses the LCD device as recited above having at least on external polarizer (fig. 1, ref. 19) on the same panel as the internal polarizer (fig. 1, ref. 17), a backlighting system (fig. 1, ref. 11, 12) on the rear panel, and where the polarizers perform a function of filtering light (fig. 1, ref. 14).

7. Regarding claim 18, Verrall discloses the LCD device as recited above, however, the reference fails to specifically teach an antireflection or an antiglare coating.

Trapani discloses a polarizer with functional layers that include an antireflection or an antiglare coating (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an antireflection or an antiglare coating since one would be motivated to eliminate the need for protective cladding and support structures of the polarizer and to maintain a relatively thinner and lighter profile (pg. 3, [0027]).

This ultimately improves the brightness and maximized performance for the display over a wide range of transmission levels (pg. 3, [0027]).

8. As to claims 19-23, Verrall discloses the LCD device as recited above where the thickness and the order of functional layers are selected to ensure an interference

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extremum at the display output for at least one wavelength in the spectral range from 500 to 600 nm (col. 8, lines 18-24).

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gw  
January 10, 2005

  
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SUPERVISORY PATENT EXAMINER  
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